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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/584,743

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Sebastien Weitbruch

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EXAMINER

MCDOWELL, JR, MAURICE L

ART UNIT

PAPER NUMBER

2628

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DELIVERY MODE

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/584,743	Applicant(s) WEITBRUCH ET AL.	
	Examiner MAURICE MCDOWELL, JR	Art Unit 2628	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 26 June 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1 and 15-27 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1, 15-27 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1, 15-27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kimura Pub. No.: US 2003/0193451 A1 in view of Tokunaga et al. Patent No.: US 6,417,824 B1.

3. Regarding claim 1, Kimura teaches: Method for processing video data to be displayed on a display screen by providing said video data having video levels selected from a predetermined number of video levels (fig. 9, 1); encoding said predetermined number of video levels with a corresponding number of subfield codewords, wherein to each bit of a subfield codeword a subfield is assigned, during which a cell of the display screen can be activated for light generation depending on the state of the corresponding bit of said subfield codeword (fig. 3); comprising the following steps: encoding the video levels of said video data in a central area of the display screen with the corresponding subfield codewords (fig. 2).

4. Kimura doesn't teach: encoding the video levels of said video data in a predetermined border area surrounding said central area of said display screen by using only those subfield codewords of said number of subfield codewords, which do not have a change of a subfield bit from a binary 0 to a binary 1 in a selectable part of the subfield codewords to prevent in said

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border area a cell which was not activated for a subfield in said selectable part from being activated for a following subfield in said selectable part, in order to avoid a response fidelity problem in said border area.

5. The analogous prior art Tokunaga teaches: encoding the video levels of said video data in a predetermined border area surrounding said central area of said display screen by using only those subfield codewords of said number of subfield codewords, which do not have a change of a subfield bit from a binary 0 to a binary 1 in a selectable part of the subfield codewords to prevent in said border area a cell which was not activated for a subfield in said selectable part from being activated for a following subfield in said selectable part, in order to avoid a response fidelity problem in said border area (fig. 28 see also col. 18 lines 32-41) (The subfield codewords (HD) do not have a change from binary 0 to 1 in a selectable part) for the benefit of to provide a method of driving a plasma display panel which is capable of improving the contrast at low power consumption while suppressing spurious borders, and capable of stabilizing selective discharge to improve the display quality.

6. It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine encoding the video levels of said video data in a predetermined border area surrounding said central area of said display screen by using only those subfield codewords of said number of subfield codewords, which do not have a change of a subfield bit from a binary 0 to a binary 1 in a selectable part of the subfield codewords to prevent in said border area a cell which was not activated for a subfield in said selectable part from being activated for a following subfield in said selectable part, in order to avoid a response fidelity problem in said border area as shown in Tokunaga with Kimura for the benefit of to provide a method of driving a plasma

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display panel which is capable of improving the contrast at low power consumption while suppressing spurious borders, and capable of stabilizing selective discharge to improve the display quality.

7. Regarding claim 15, Tokunaga further teaches: Method, wherein video levels corresponding to subfield codewords being not used are recreated by dithering (fig. 17, 350).
8. Regarding claim 16, Tokunaga further teaches: Method, wherein said selectable part of the subfield codewords, which shall not have a change of a subfield bit from a binary 0 to a binary 1, is determined by a power level of a picture to be displayed (col. 4 lines 52-58).
9. Regarding claim 17, Tokunaga further teaches: Method, wherein said part of the subfield codewords being determined to be with no change of a subfield bit from a binary 0 to a binary 1 includes the most significant bits of the subfield codewords (fig. 17, 331).
10. Regarding claim 18, Tokunaga further teaches: Method, wherein the border area is divided into several sub-areas, a first one of said several sub-areas being illuminated by subfield codewords with a first selectable part with no change of a subfield bit from a binary 0 to a binary 1 and a second one of said several areas being illuminated by subfield codewords with a second selectable part with no change of a subfield bit from a binary 0 to a binary 1, which second selectable part includes the first selectable part of subfield codewords or at least a portion of it or which is different from the first selectable part (fig. 2, 30 see also col. 4 lines 45-51).
11. Regarding claim 19, Tokunaga further teaches: Method, wherein cells of the display screen are subjected to dynamic priming (col. 9 lines 15-24).
12. Regarding claim 20, Kimura teaches: Device for processing video data to be displayed on a display screen comprising: data providing means for providing said video data having video

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levels selected from a predetermined number of video levels (fig. 9, 11); encoding means for encoding said predetermined number of video levels with a corresponding number of subfield codewords (fig. 3); and illuminating means for illuminating pixels in a central area of said display screen in accordance with said subfield codewords (fig. 2);

13. Kimura doesn't teach: wherein said illuminating means is adapted for illuminating pixels in a border area surrounding said central area of said display screen by using only those subfield codewords of said number of subfield codewords, which do not have a change of a subfield bit from a binary 0 to a binary 1 in a selectable part of the subfield codewords.

14. The analogous prior art Tokunaga teaches: wherein said illuminating means is adapted for illuminating pixels in a border area surrounding said central area of said display screen by using only those subfield codewords of said number of subfield codewords, which do not have a change of a subfield bit from a binary 0 to a binary 1 in a selectable part of the subfield codewords (fig. 28 see also col. 18 lines 32-41) for the benefit of to provide a method of driving a plasma display panel which is capable of improving the contrast at low power consumption while suppressing spurious borders, and capable of stabilizing selective discharge to improve the display quality.

15. It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine wherein said illuminating means is adapted for illuminating pixels in a border area surrounding said central area of said display screen by using only those subfield codewords of said number of subfield codewords, which do not have a change of a subfield bit from a binary 0 to a binary 1 in a selectable part of the subfield codewords as shown in Tokunaga with Kimura for the benefit of to provide a method of driving a plasma display panel

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which is capable of improving the contrast at low power consumption while suppressing spurious borders, and capable of stabilizing selective discharge to improve the display quality.

16. Regarding claim 21, Tokunaga further teaches: Device, further comprising dithering means for recreating video levels corresponding to subfield codewords being not used (fig. 17, 350).

17. Regarding claim 22, Tokunaga further teaches: Device, further comprising a power level determining means for determining the power level of said video data, so that said part of the subfield codewords with no change of a subfield bit from a binary 0 to a binary 1 is determinable on the basis of said power level (col. 4 lines 52-58).

18. Regarding claim 23, Tokunaga further teaches: Device, wherein said part of the subfield codewords being determined to be with no change of a subfield bit from a binary 0 to a binary 1 includes the most significant bits of the subfield codewords (fig. 17, 331).

19. Regarding claim 24, Tokunaga further teaches: Device, wherein said illuminating means is adapted to divide said border area into several sub-areas, a first one of said several sub-areas being illuminable by subfield codewords with a first selectable part with no change of a subfield bit from a binary 0 to a binary 1 and a second one of said several sub-areas being illuminable by subfield codewords with a second selectable part with change of a subfield bit from a binary 0 to a binary 1, which second selectable part includes the first selectable part of subfield codewords or at least a portion of it or which is different from the first selectable par (fig. 2, 30 see also col. 4 lines 45-51).

20. Regarding claim 25, Tokunaga further teaches: Device, further comprising dynamic priming means for dynamically priming cells of the display screen (col. 9 lines 15-24).

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21. Regarding claim 26, Kimura teaches: Method for processing video data to be displayed on a display screen by providing said video data having video levels selected from a predetermined number of video levels (fig. 9, 1); and encoding said predetermined number of video levels with a corresponding number of subfield codewords, wherein to each bit of a subfield codeword a subfield is assigned, during which a cell of the display screen can be activated for illuminating pixels depending on the state of the corresponding bit of said subfield codeword comprising the following steps (fig. 3): encoding the video levels of said video data in a central area of the display screen with the corresponding subfield codewords (fig. 3);
22. Kimura doesn't teach: encoding the video levels of said video data in a predetermined border area surrounding said central area of said display screen by using only those subfield codewords of said number of subfield codewords, which do not have a binary 0 between two binary 1 in a selectable part of the subfield codewords to prevent in said border area a cell which was not activated for a subfield in said selectable part from being activated for a following subfield in said selectable part, in order to avoid a response fidelity problem in said border area.
23. The analogous prior art Tokunaga teaches: encoding the video levels of said video data in a predetermined border area surrounding said central area of said display screen by using only those subfield codewords of said number of subfield codewords, which do not have a binary 0 between two binary 1 in a selectable part of the subfield codewords to prevent in said border area a cell which was not activated for a subfield in said selectable part from being activated for a following subfield in said selectable part, in order to avoid a response fidelity problem in said border area (fig. 28, see also col. 18 lines 32-41) for the benefit of to provide a method of driving a plasma display panel which is capable of improving the contrast at low power consumption

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while suppressing spurious borders, and capable of stabilizing selective discharge to improve the display quality.

24. It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine encoding the video levels of said video data in a predetermined border area surrounding said central area of said display screen by using only those subfield codewords of said number of subfield codewords, which do not have a binary 0 between two binary 1 in a selectable part of the subfield codewords to prevent in said border area a cell which was not activated for a subfield in said selectable part from being activated for a following subfield in said selectable part, in order to avoid a response fidelity problem in said border area as shown in Tokunaga with Kimura for the benefit of to provide a method of driving a plasma display panel which is capable of improving the contrast at low power consumption while suppressing spurious borders, and capable of stabilizing selective discharge to improve the display quality.

25. Regarding claim 27, Kimura teaches: Device for processing video data to be displayed on a display screen comprising: data providing means for providing said video data having video levels selected from a predetermined number of video levels (fig. 9, 1); encoding means for encoding said predetermined number of video levels with a corresponding number of subfield codewords (fig. 3), wherein to each bit of a subfield codeword a subfield is assigned, during which a cell of the display screen can be activated for illuminating pixels depending on the state of the corresponding bit of said subfield codeword (fig. 2); and illuminating means for illuminating pixels in a central area of said display screen in accordance with said subfield codewords (fig. 2).

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26. Kimura doesn't teach: wherein said illuminating means is adapted for illuminating pixels in a border area surrounding said central area of said display screen by using only those subfield codewords of said number of subfield codewords, which do not have a binary 0 between two binary 1 in a selectable part of the subfield codewords to prevent in said border area a cell which was not activated for a subfield in said selectable part from being activated for a following subfield in said selectable part, in order to avoid a response fidelity problem in said border area.

27. The analogous prior art Tokunaga teaches: wherein said illuminating means is adapted for illuminating pixels in a border area surrounding said central area of said display screen by using only those subfield codewords of said number of subfield codewords, which do not have a binary 0 between two binary 1 in a selectable part of the subfield codewords to prevent in said border area a cell which was not activated for a subfield in said selectable part from being activated for a following subfield in said selectable part, in order to avoid a response fidelity problem in said border area (fig. 28 see also col. 18 lines 32-41) for the benefit of to provide a method of driving a plasma display panel which is capable of improving the contrast at low power consumption while suppressing spurious borders, and capable of stabilizing selective discharge to improve the display quality.

28. It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine wherein said illuminating means is adapted for illuminating pixels in a border area surrounding said central area of said display screen by using only those subfield codewords of said number of subfield codewords, which do not have a binary 0 between two binary 1 in a selectable part of the subfield codewords to prevent in said border area a cell which was not activated for a subfield in said selectable part from being activated for a following

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subfield in said selectable part, in order to avoid a response fidelity problem in said border area as shown in Tokunaga with Kimura for the benefit of to provide a method of driving a plasma display panel which is capable of improving the contrast at low power consumption while suppressing spurious borders, and capable of stabilizing selective discharge to improve the display quality.

Response to Arguments

29. Applicant's arguments with respect to claims 1, 15-27 have been considered but are moot in view of the new ground of rejection.

Conclusion

30. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to MAURICE MCDOWELL, JR whose telephone number is

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(571)270-3707. The examiner can normally be reached on Mon-Friday 7:30am - 5:00pm Eastern Time.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Xiao Wu can be reached on 571--272-7761. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

MM

/XIAO M. WU/
Supervisory Patent Examiner, Art Unit 2628